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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,619	03/01/2002	Don R. Stevenson	47399.0015	1903

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EXAMINER

THEXTON, MATTHEW

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,619

Applicant(s)

STEVENSON ET AL.

Examiner

Matthew A. Thexton

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AS

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 83-123 is/are pending in the application.
- 4a) Of the above claim(s) 83-102 and 119-123 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 103-118 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 83-123 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 83-102, drawn to formulations comprising halogenated resin, phosphite, and zinc, classified in class 524, subclass various depending on the specific phosphite and the specific zinc source.
- II. Claims 103-123, drawn to formulations consisting essentially of phosphite and zinc, classified in class 252, subclass 400.23 or 400.24 depending on the specific phosphite.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as additive formulation for polyolefin, as suggested by McCullough, Jr. (US 6022946) and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that

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this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Claims 83-123 are generic to a plurality of disclosed patentably distinct species comprising the various phosphites encompassed therein. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Louis F. Wagner, at 330-258-6453, on 2004 February 25 at 330-258-6453 a provisional election was made with traverse to prosecute the invention of Group II and the specie DOVERPHOS ® 613 (also disclosed as #3 on page 7, and falling with the genera indicated as "(iv)," "(IV)," and "(VIII)" in the claims), claims 103-118 being generic. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 83-102, and 119-123 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The genera "(iv)" and "(IV)" are defined as C10-15. In claims 112 and 118 new genera are introduced consisting of "(VIII)" which is defined as C12-15 and "(IX)" which is defined as C10.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

The disclosure is objected to because of the following informalities:

1. Replacement page 1, received 2004 January 12 refers to provisional patent application serial number 60/314181 as being filed March 16, 2001. This appears to be in error; and the correct date appears to be August 16, 2001.

2. Replacement page numbered 17 appears to have been intended to be page 18. Accordingly, the correct page 17 needs to be submitted and a new page 18 with the correction to Table XIII changing PHR to "Parts" needs to be submitted.

3. The various brief descriptions of figures on pages 3-4 appear to require correction of the amounts of polymer, changing "phr" to "parts."

4. The brief description of figure 7 on page 4 appears to refer to Table VI. If this is the case, it appears that clearly stating so would clarify the Description.

Appropriate correction is required.

Claims 104, 105, 107, 108, 114, 115, 116 are objected to because of the following informalities:

These claims employ designations using bracketed lowercase letters which conflict with the designations of the claim or claims from which they depend. For example, in the case of claims 107, 108, and 116 it appears that designation "(d)" instead of "(a)" would be appropriate. Other designations appear to require correction. Appropriate correction is requested.

Claim Objections

Claims 106-118 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The sub-genus VI, ostensibly "C8-15 pentaerythritol phosphites" are defined in terms of R4, which is said to be the same as R1, which is H or C1-9. C1-9 is not a subset of C8-15.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 2003 July 7 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The entry for the international preliminary examination report has been lined through because this is not a prior art reference.

Claim Rejections - 35 USC § 103

Claims 103-115, 117, and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valdiserri (US 4614756).

Claim 103 requires molar ratio of P/Zn of 10 to 200; claim 104 requires molar ratio of 16.7 to 80; claim 105 requires molar ratio of 24 to 46.6; claim 113 requires molar ratio of 4 to 80; claim 114 requires molar ratio of 6 to 75; claim 115 requires molar ratio of 8 to 73.

Examples 18 and 19 of the reference employ about 14.7 and 29.4 molar ratio of P/Zn respectively based on a bisphenol A-alkyl phosphite having a molecular weight of 1028 for each 'monomer' of the oligomer '439' (i.e., assuming the '439' has four C12 alkyl groups) and having two Phosphorus atoms, and zinc stearate having a molecular weight of 631.4 with one zinc atom.

The reference employs stabilizer '439' bisphenol A-alkyl phosphite oligomer. While not identical to Applicant's DOVERPHOS ® 613 or 675, it is suggestive of the mere monomer and would have been an obvious variant to one of ordinary skill in the art at the time of the invention since they are chemically analogous and the monomeric forms were commercially available. The reference suggests resin-free stabilizer formulations by the claims.

The tin containing additive required by the reference disclosure is not excluded by Applicant's limitation of "essentially toxic-metal free" of claims 103-112; nor by Applicant's transitional phrase, "consists essentially of," since its presence does not appear to materially affect the basic and novel characteristics of the claimed inventions.

The reference disclosure of example 16-18 demonstrates that increasing amounts of zinc stearate up to the test limit provides increasing stabilization. Further, comparative examples C-G demonstrate that zinc is preferred to calcium or magnesium.

Claim 116 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valdiserri (US 4614756).

Claim 116 requires that the formulation be "substantially free of any other metallic stabilizer components."

The Valdiserri reference discusses the tin stabilizers at column 1, lines 12-47. It is understood that their relative expense is a motivating factor in identifying and employing lower cost materials or enhancers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have omitted the tin

stabilizers in the formulations so as to permit the commercial user the option to capitalize on any identified lower cost materials or enhancers, which opportunity would have been precluded by pre-formulating with the tin stabilizer.

Claims 103-115, 117, and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valdiserri (US 4614756) and York (US 4116926).

Claim 103 requires molar ratio of P/Zn of 10 to 200; claim 104 requires molar ratio of 16.7 to 80; claim 105 requires molar ratio of 24 to 46.6; claim 113 requires molar ratio of 4 to 80; claim 114 requires molar ratio of 6 to 75; claim 115 requires molar ratio of 8 to 73.

Examples 18 and 19 of the reference Valdiserri employ about 14.7 and 29.4 molar ratio of P/Zn respectively based on a bisphenol A-alkyl phosphite having a molecular weight of 1028 for each 'monomer' of the oligomer '439' (i.e., assuming the '439' has four C12 alkyl groups) and having two Phosphorus atoms, and zinc stearate having a molecular weight of 631.4 with one zinc atom.

The Valdiserri reference employs stabilizer '439' bisphenol A-alkyl phosphite oligomer. While not identical to Applicant's DOVERPHOS ® 613 or 675, it is suggestive of the mere monomer and would have been an obvious variant to one of ordinary skill in the art at the time of the invention since they are chemically analogous and the monomeric forms were commercially available. The reference suggests resin-free stabilizer formulations by the claims.

The tin containing additive required by the reference disclosure is not excluded by Applicant's limitation of "essentially toxic-metal free" of claims 103-112; nor by Applicant's transitional phrase, "consists essentially of," since its presence does not appear to materially affect the basic and novel characteristics of the claimed inventions.

Claim 111 requires that the formulation be "essentially free of ...calcium." The Valdiserri reference disclosure of example 16-18 demonstrates that increasing amounts of zinc stearate up to the test limit provides increasing stabilization. Further, comparative examples C-G demonstrate that zinc is preferred to calcium or magnesium. Accordingly, it would have been obvious to one of ordinary skill in the art to omit the calcium.

The York reference discloses the monomeric versions of bisphenol A phosphite employed as stabilizers for polyvinyl chloride, specifically in combination with zinc octoate. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the York reference with any of well known zinc carboxylates, as suggested by Valdiserri and the state of the art. That obvious step of employing carboxylates with greater molecular weight would increase the molar ratio of P/Zn at the weight dosage of the experiments disclosed by York so as to be encompassed by Applicant's claims. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Valdiserri to employ the phosphites of York because of their chemical similarity.

Claim 116 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valdiserri (US 4614756) and York (US 4116926).

Claim 116 requires that the formulation be "substantially free of any other metallic stabilizer components."

The Valdiserri reference discusses the tin stabilizers at column 1, lines 12-47. It is understood that their relative expense is a motivating factor in identifying and employing lower cost materials or enhancers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have omitted the tin stabilizers in the formulations so as to permit the commercial user the option to capitalize on any identified lower cost materials or enhancers, which opportunity would have been precluded by pre-formulating with the tin stabilizer.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Asada et al. (H506) discloses zinc and phosphite additives for polyester polymers in which the specific method of compounding precludes a nonpolymeric formulation and the polyester would materially affect the essential character of Applicant's claims.

Staniek et al. ((S 6103796) discloses solid formulations of phosphites and zinc oxide. The phosphites may be encompassed by one or more of the non-elected species of claims 113-123, which claims are not limited to "liquid additive composition."

Hutton et al. (US 3998782) discloses polyvinyl chloride stabilizer formulations comprising bisphenol A phosphite and metal soaps such as zinc benzoate, laurate, stearate, hexoate.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 571-272-1125. The examiner can normally be reached on Monday-Friday, 9:30 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. A. Thexton

Matthew A. Thexton
Primary Examiner
Art Unit 1714